

## Claims

1. A method for transferring one or more files from a host peer to a target peer in which respective message digests are calculated for a file on a host peer and a target peer, and a comparison between the calculated digests is made in order to establish whether the target  
5 peer possesses the file in question.

2. A method according to claim 1 in which the comparison is made prior to transmission of a file from the host peer to the target peer.

3. A method according to claim 2 in which the comparison is made in the event that the target peer already possesses a file of the same name as that to be transferred.

10 4. A method according to claim 3 in which, in the event that the result of the comparison is that the calculated message digests are identical, the file is not transmitted by the host peer.

5. A method according to claim 1 in which comparison of message digests is made after a file has been sent to the target peer.

15 6. A method according to claim 5 in which, in the event that the result of the comparison is that the message digests differ, a file or part of a file is re-transmitted from the host peer to the target peer.

7. A method according to claim 1 in which the message digest is calculated by means of a hashing algorithm.

20 8. A method according to claim 7 in which the message digest is calculated by an algorithm that has an input space that is approximately evenly distributed over the digest space.

9. A method according to claim 7 in which the hashing algorithm is in accordance with specification MD5 as described in IETF RFC 1321.

10. A method according to claim 1 in which a plurality of communication channels are established between a host peer and each target peer.

11. A method according to claim 10 in which each channel includes a TCP/IP connection between the peers.

5 12. A method according to claim 10 in which the one or more files are transmitted as discrete packets, the packets being sent on an available channel.

13. A method according to claim 10 in which the packets are removed from the tail of a packet queue.

10 14. A method according to claim 10 in which packets are removed from the tails of a plurality of packet queues in turn.

15 15. A method according to claim 14 in which the frequency at which packets are removed from the queues in a predetermined sequence such that the frequency at which packets are removed varies from one queue to another.

16. A network of computers in which files are transferred by a method according to claim 1.

17. A computer software product executable on a computer to enable that computer to transfer files by a method according to claim 1.